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Arctic Indigenous Languages Symposium
*Protecting Culture and Transferring Traditional Knowledge -
The Critical Role of Indigenous Language*

Good afternoon & Thank you for the invitation to participate in this Symposium in Tromsø. My name is Inger Marie Eira. I am a sami reindeer herder, living in Guovdageaidnu/Kautokeino, one of the largest reindeer herding area in the world. I am also a linguist; I have a Masters Degree in Linguistics, Sami language. My first language is sami, and I am writing my research in sami language and I talk sami with my informants. Now i am working with my PhD at the Sami University College which is a part of IPY EALAT

EALÁT is a project in the International Polar Year program. EALÁT is a Sámi word with the meaning “something to live on (especially for reindeer), and it originates from word *eallit* which means ‘to live’. The project focuses on adaptation to the projected future climate change in world reindeer husbandry. More than 20. Indigenous peoples have their main income from reindeer husbandry in 9 national states. Sámi reindeer herding represents roughly one third of the world’s reindeer herding

Long before the development of modern science, arctic indigenous peoples have developed their ways of knowing how to survive. Indigenous knowledge or Traditional knowledge is passed between generations through oral history, stories and lessons, and more recently, in written form. Indigenous knowledge is dynamic; it is modified by its holders to reflect changes in the environment. Each new generation incorporates its own empirical knowledge.

It is through language that traditional knowledge is available. Aspects of cultural values and worldview are often encoded in the language, observations and stories that are being communicated. Using consistent, clear and relevant language in a subject is needed for communication for examples between reindeer herders and state authorities. Communication is defined as a process by which we assign and convey meaning in an attempt to create shared understanding.

In Norway overgrazing of reindeer pastures has been a topic of discussion, an example showing lack of communication between herders and authorities. The Norwegian authorities do not use the unique language of reindeer herding when management procedures are developed. Sometimes documents are translated from Norwegian to Sami, but without including herders’ expert language. Many terms can not easily be translated into other languages. Reindeer herders have a rich vocabulary in use in everyday work. One term herders are using in winter is *guohtun*. On snow-covered land *guohtun* simply means “possibility of the reindeer to finding lichen through the snow”. When herders talk about bad *guohtun* Norwegian authorities believe the herders talk about *overgrazing*, but actually they are trying to communicate knowledge of snow quality. For this reason it is necessary to use reindeer herders’ terminology. Indigenous people’s languages shall

therefore always be used in communication where indigenous peoples are involved. I believe that if reindeer herders' unique language is neglected, the language will disappear and they will lose the rights to conduct herding and traditional use of land.

The Sámi people are living in Norway, Sweden, Finland and Russia. The Sámi language is not a majority language in any of these states. In Norway Sami language is an official language. The physical environment leaves its mark on every culture. The Sami culture bears evidence of a long intimate relationship with the Arctic environment. The Sami language mirrors the knowledge of the Sami about nature and landscape. In this way the language shows the ability of the Sami to know how to manage the landscape they live in. In my dialect of Guovdageaidnu there is over 1000 individual terms related to reindeer, primarily regarding each individual colors and antlers.

The subject of my research is Sami reindeer herders' snow terminology in a changing climate, the title of my project is: THE SECRETS OF SNOW, A LINGUISTIC ANALYSIS OF SNOW AND THE MEANING OF SNOW FOR REINDEER PASTURAGE.

It is to document linguistic knowledge about snow conditions and how reindeer herders' are adapting to changing conditions. Language plays a key role in structuring of knowledge and knowledge sharing. Combining herders' knowledge together with other knowledge will contribute to a stronger means for managing the environment and the economy for the future.

Reindeer herders and their reindeer live for 8-9 months a year on snow, in extreme environments with variable climatic conditions. Reindeer herding is strongly influenced by climatic conditions, and most of all, snow conditions.

For the indigenous people of the Arctic, the understanding of snow and ice has always been necessary for survival. Sámi reindeer herders use some 200-300 different analytical terms for snow in relation to reindeer herding. This shows the importance which snow has had and has for reindeer herding and for the livelihood of the reindeer herders. The richness in snow terminology makes it possible to give detailed information about snow conditions. One can categorize the snow conditions according to a number of different factors, such as the amount of snow, the consistency of the snow, the bearing conditions of the snow, traces present in the snow, the grazing conditions for reindeer.

Reindeer herding terminology and phraseology has a strong foothold in the Sámi language. This knowledge has been accumulated through many generations of reindeer herders. It is an integrated part of their language. This knowledge is part of the way of life of Sami reindeer herders and it is a part of the individual herder's actions and decisions.

Knowledge about snow and snow condition has not been developed by accident, but because it is necessary to survive under extremely challenging and constantly changing climatic conditions.

The quality of snow can be assessed along several dimensions. Here are some of them: It is about: Consistency, thickness, layers, hardness, water content, processes.

One word in Sami which explain 1 exact phenomenon need 33 words translated to English: The sami snow word *Skáva*: which in English will be: crust of ice on snow, formed in the evening after the sun has thawed the top of the snow during the day; thin crust which begins to form on snow, following mild weather

Here is mine main informant - he is 91 year still active reindeer herder - he is a living library.

The next slide shows how we work together including both traditional and scientific understand of snow change.

This slide show the different snow layers in Guovdageindnu in January 18th this year. Early this wither there was not much snow, 37 cm depth. The air temperature was -26 degrees centigrade while it was -1 degrees centigrade at the snow bottom. The snow change occurs because of the temperature gradient through the snowpack. Reindeer herders would say *vahca*, *seanáš*, *gaskageadni*, *seanáš* = this give good *Guohtun*.

I this project 8 reindeer herder students from Norway and Finland is documenting traditional knowledge about snow and how reindeer herder are using snow terms in their work with the herd. These students have recorded and filed over 100 hours of interviews. They are now transcribing tapes for digital use. They have also videos and pictures from their fieldwork. Tapes, transcriptions, videos and photos are stored in a database. Competence building for young indigenous students is important and should have priority. Sami University College provides these students with courses in methods for working with TK. Anne Marja Magga, Sami reindeer herders from Finland, is one of our students are present here to day.

I will provide these two key messages as recommendations for the symposium to consider. It is about using indigenous people's languages and competence building related to documentation of indigenous language and knowledge

- 1) Arctic Indigenous people's languages shall always be used in management of indigenous people's natural resources and in communication where indigenous peoples are involved

- 2) Competence building for young arctic indigenous students related to documentation of indigenous language and knowledge are important and should have priority.